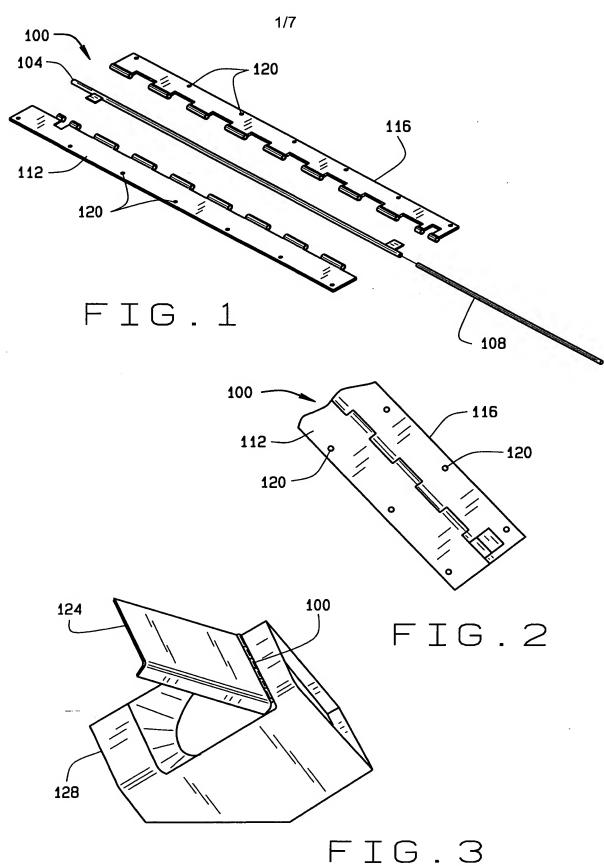
Title: HINGE APPARATUS WITH TWO-WAY CONTROLLABLE SHAPE MEMORY ALLOY (SMA) HINGE PIN ACTUATOR AND METHODS OF MAKING TWO-WAY SMA PARTS

Inventor: James H. Mabe Atty. Ref.: 7784-000704 Attorney Anthony G. Fussner (314) 726-7500



Atty. Ref.: 7784-000704
Attorney Anthony G. Fussner (314) 726-7500

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DISPLACEMENT (degrees)

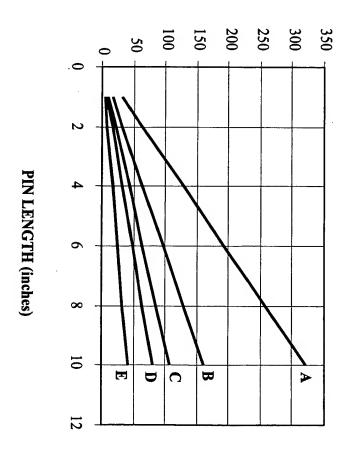
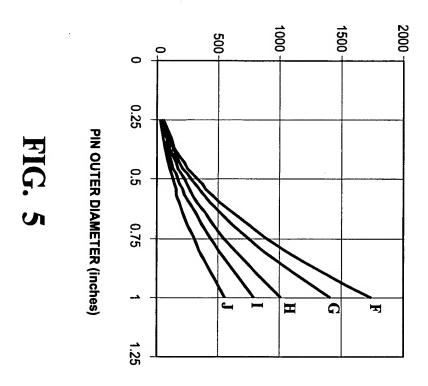


FIG. 4

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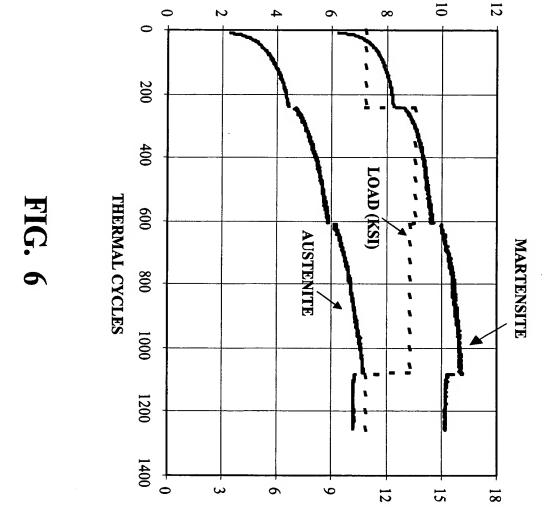
TORQUE (inches * pounds)



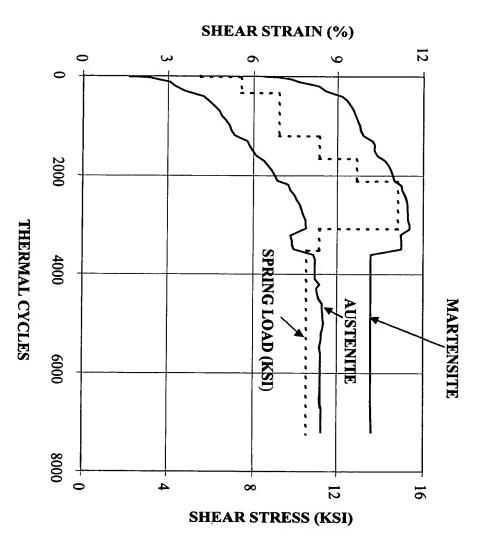
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SHEAR STRAIN (%)

SHEAR STRESS (KSI)



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7IG. 7

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DYNAMIC SHEAR STRAIN (%)

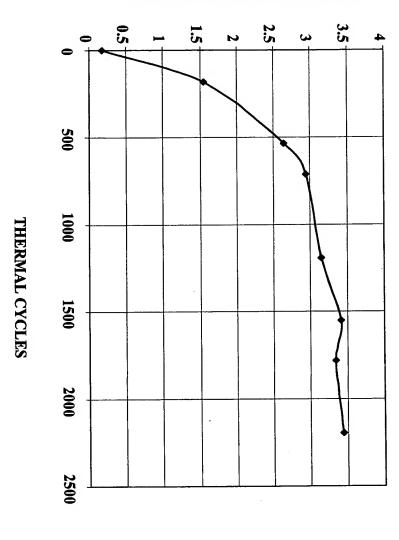


FIG. 8

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SHEAR STRESS (KSI)

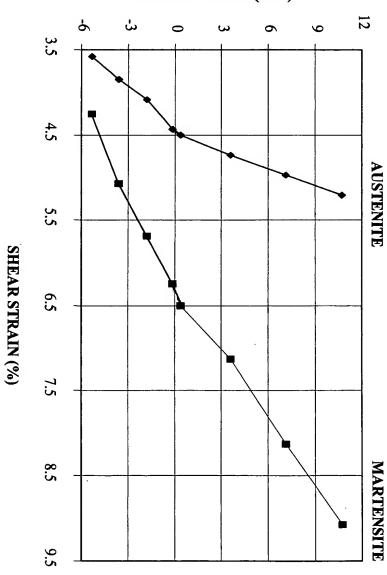


FIG. 9